

LIGHT GENERATING DEVICE TO INTRAVASCULAR USE

Abstract of the Disclosure

Light generating devices for illuminating portions of vascular tissue, to render photodynamic therapy. In one embodiment, a light source array preferably including
5 a plurality of light emitting diodes, a focusing lens, and a light diffusing element are included in a distal end of a catheter. A balloon is optionally provided to interrupt blood flow that can block the transmission of light, and to center the apparatus in a blood vessel. Optical fibers optionally direct light from the light source to the
10 diffusing element. The light source array can have a radial or linear configuration and can produce more than one wavelength of light for activating different photoreactive agents. Linear light source elements are particularly useful to treat elongate portions of tissue in a vessel. One embodiment intended for use with a conventional balloon catheter integrates light sources into a guidewire.